U. S. DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS

AROMATIC RED CEDAR CLOSET LINING

COMMERCIAL STANDARD CS26–30

ELIMINATION OF WASTE
Through
SIMPLIFIED COMMERCIAL PRACTICE

Below are described some of the series of publications of the Department of Commerce which deal with various phases of waste elimination.

Simplified Practice Recommendations.

These present in detail the development of programs to eliminate unnecessary variety in sizes, dimensions, styles and types of over 100 commodities. They also contain lists of associations and individuals who have indicated their intention to adhere to the recommendations. These simplified schedules, as formulated and approved by the industries, are indorsed by the Department of Commerce.

Commercial Standards.

These are developed by various industries under a procedure similar to that of simplified practice recommendations. They are, however, primarily concerned with considerations of grade, quality, and such other characteristics as are outside the scope of dimensional simplification.

American Marine Standards.

These are promulgated by the American Marine Standards Committee, which is controlled by the marine industry and administered as a unit of the division of simplified practice. Their object is to promote economy in construction, equipment, maintenance, and operation of ships. In general, they provide for simplification and improvement of design, interchangeability of parts, and minimum requisites of quality for efficient and safe operation.

Lists of the publications in each of the above series can be obtained by applying to the National Bureau of Standards, Washington, D. C.

U. S. DEPARTMENT OF COMMERCE
R. P. LAMONT, Secretary
BUREAU OF STANDARDS
GEORGE K. BURGESS, Director

AROMATIC RED CEDAR CLOSET LINING

COMMERCIAL STANDARD CS26–30

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AROMATIC RED CEDAR CLOSET LINING, CS26–30

ACCEPTORS

ASSOCIATIONS

American Institute of Architects, Colorado chapter, Denver, Colo. (in principle).
American Institute of Architects, Florida central chapter, St. Petersburg, Fla.
Associated General Contractors of America (Inc.), Louisville chapter, Louisville, Ky.
Associated General Contractors of America (Inc.), Oklahoma branch, Oklahoma City, Okla.
Illinois Lumber & Material Dealers Association, Chicago, Ill.
Mountain States Lumber Dealers Association, The, Denver, Colo.
National Retail Lumber Dealers' Association, Chicago, Ill.
New England Council, Boston, Mass. (in principle).
North Dakota Lumbermen's Association, Bismarck, N. Dak.
Northwestern Lumbermen's Association, Minneapolis, Minn.
Structural Service Bureau, Philadelphia, Pa.

FIRMS

Alabama Polytechnic Institute, Auburn, Ala.
Baxter & Co., C. B., Kansas City, Mo.
Baxter Lumber & Mercantile Co., Kansas City, Mo.
Bay Bros. Lumber Co., St. Louis, Mo.
Bersback, Louis Boynton, Minneapolis, Minn.
Bosman & Casson (Inc.), Harrison, N. J. (in principle).
Brown & Co., Geo. C., Memphis, Tenn.
Bruce Co., E. L., Memphis, Tenn.
Buell, Benning C., Buffalo, N. Y.
Cameron Lumber Co. (Inc.), Newburgh, N. Y.
Carrier Lumber Co., Sardis, Miss.
Channel Co., Long Beach, Calif. (in principle).
Chickamauga Cedar Co., Stevenson, Ala.
City Lumber Co. of Bridgeport (Inc.), Bridgeport, Conn.
Columbia Lumber Co., The, New Haven, Conn.
Comfort-Coal Lumber Co., Hackensack, N. J.
Decorative Furnisher, The, New York, N. Y.
Derrick (Inc.), Robert O., Detroit, Mich.
El Paso Sash & Door Co., El Paso, Tex.
Farrin Lumber Co., The M. B., Cincinnati, Ohio.
Griffiths & Co., Dallas, Tex.
Harris Manufacturing Co., Johnson City, Tenn. (in principle).
Heilman Lumber Co., Ford City, Pa.
Heilman Lumber Co., Kittanning, Pa.
Houston & Liggett, Lewisburg, Tenn.
Huebner Lumber & Manufacturing Co., Detroit, Mich.
Iron City Sash & Door Co., Pittsburgh, Pa.
Johnson, Miller, Miller & Yeager, Terre Haute, Ind.
K. & G. Lumber Co., Decatur, Ala. (in principle).
Kinnier Co. (Inc.), The, Lynchburg, Va.
Likly & Rockett Trunk Co., The, Cleveland, Ohio.
Lowell-Whipple Co., Worcester, Mass.
Lumber Specialty & Warehouse Co., Boston, Mass.
Lumber Trade Journal, The, New Orleans, La. (in principle).
Macaulay Corporation, C. R., Brooklyn, N. Y.
McGowan Lumber Co., C. E., Milbank, S. Dak.
McMinnville Manufacturing Co., McMinnville, Tenn.
Michigan State College, East Lansing, Mich.
Mitchell Manufacturing, Co., Stevenson, Ala.
Morrison-Merrill & Co., Salt Lake City, Utah.
Nashville Hardwood Flooring Co., Nashville, Tenn.
Nelson Lumber Co., Murfreesboro, Tenn.
Norfolk Lumber Co., Stoughton, Mass.
North Carolina State College, Raleigh, N. C. (in principle).
Oklahoma Agricultural & Mechanical College, Stillwater, Okla.

Oklahoma Sash & Door Co., Oklahoma City, Okla.
Perkins, Chatten & Hammond, Chicago, Ill.
Perry Lumber Co., Lincoln, Nebr.
Phillips & Co., I. W., Tampa, Fla.
Ramsey & Sons (Inc.), A. H., Miami, Fla.
Robertson, E. L., Miami, Fla.
Root, C. D., Crown Point, Ind.
Stiles & Co., H. A., Boston, Mass. (in principle).
Strable Hardwood Co., Oakland, Calif.
Strong & Hale Lumber Co., The, Portland, Conn.
Sugden, Percy, Savannah, Ga.
Swenson Co. (Inc.), L. H., Poughkeepsie, N. Y.
Templeton, H. F., San Angelo, Tex.
Tennessee Red Cedar & Novelty Co., Chattanooga, Tenn.
University of California, Berkeley, Calif.
University of Delaware, (Women's College), Newark, Del.
University of Idaho, Moscow, Idaho.
University of New Hampshire, Durham, N. H.

GOVERNMENT

United States Department of Agriculture, Washington, D. C.
United States Treasury Department, Washington, D. C

AROMATIC RED CEDAR CLOSET LINING

COMMERCIAL STANDARD CS26–30

On May 23, 1930, a commercial standard for aromatic red cedar closet lining was adopted at a conference to which all interests were invited. The industry has since accepted and approved for promulgation by the Department of Commerce the specifications shown herein.

The standard is effective for new production October 1, 1930.

Promulgation recommended.

I. J. Fairchild,
Chief, Division of Trade Standards.

Promulgated.

George K. Burgess,
Director, Bureau of Standards.

Approved.

R. P. Lamont,
Secretary of Commerce.

COMMERCIAL STANDARD CS26–30

I. SCOPE

This commercial standard is a minimum specification for clothes closet lining made only from genuine aromatic red cedar (*Juniperus virginiana*).

It covers width, thickness, minimum length, matching, heartwood requirements, and permissible defects.

II. GENERAL REQUIREMENTS

All commercial standard aromatic red cedar closet lining shall be straight, well milled, and of such a nature as to make a sound finished job without cutting to eliminate defects.

III. DETAIL REQUIREMENTS

Standard nominal thicknesses shall be $\frac{3}{8}$ inch and $\frac{13}{16}$ inch (actual thickness $\frac{11}{32}$ inch and $\frac{25}{32}$ inch).

Standard lengths shall be 8 inches and longer and of fair average to make an economical and satisfactory finished job.

Standard widths and tally shall be as follows:

1½-inch face, tallied as 2-inch.
2-inch face, tallied as 2½-inch.
2¼-inch face, tallied as 2¾-inch.
2½-inch face, tallied as 3-inch.
3-inch face, tallied as 3¾-inch.
3¼-inch face, tallied as 4-inch.
3½-inch face, tallied as 4¼-inch.
4-inch face, tallied as 4¾-inch.
4¼-inch face, tallied as 5-inch.

NOTE.—It is optional with each manufacturer as to the number of the above widths he desires to make.

Matching.—Each piece shall be side and end matched in accordance with the dimensions shown in the detail drawings in Figures 1 and 2, except that hollow backing shall be optional with each manufacturer.

Heartwood requirements.—The face side of each piece shall grade not less than 75 per cent red heartwood, surface measurement. Sapwood extending entirely across the face of any piece shall not be permitted.

Permissible defects.—The following defects shall be permitted:

Slight imperfections in dressing, such as machine burns, "pick-up" of grain around knots, etc.

Small breaks on the edges that will be closed by the tongue and groove.

Sound knots.

White streaks in the heartwood and slight shakes shown therein.

IV. GUARANTEE

The following or a similar guarantee shall be used in connection with sales of commercial standard aromatic red cedar closet lining. The label may be used on either or both package and invoice.

> The manufacturer guarantees this genuine aromatic red cedar closet lining to conform to the standard grading rules as published in Department of Commerce, Commercial Standard CS26–30, for Aromatic Red Cedar Closet Lining.
>
> _____
> (Name of manufacturer.)

V. MANUFACTURERS RECOMMENDATIONS

The following instructions are not part of the commercial standard for cedar closet lining, but represent the manufacturers recommendations for the most efficient use of red cedar closet lining and cedar-lined storage receptacles.

CONSTRUCTION OF RED CEDAR CLOSETS

The entire inside surface of the closet should be covered, including the inside of the door, with ⅜-inch cedar lining. It is preferable to use $^{13}/_{16}$-inch cedar flooring for covering the floors, but ⅜-inch may be substituted if desired. The door should be tight fitting, and, if necessary, it should be weather-stripped.

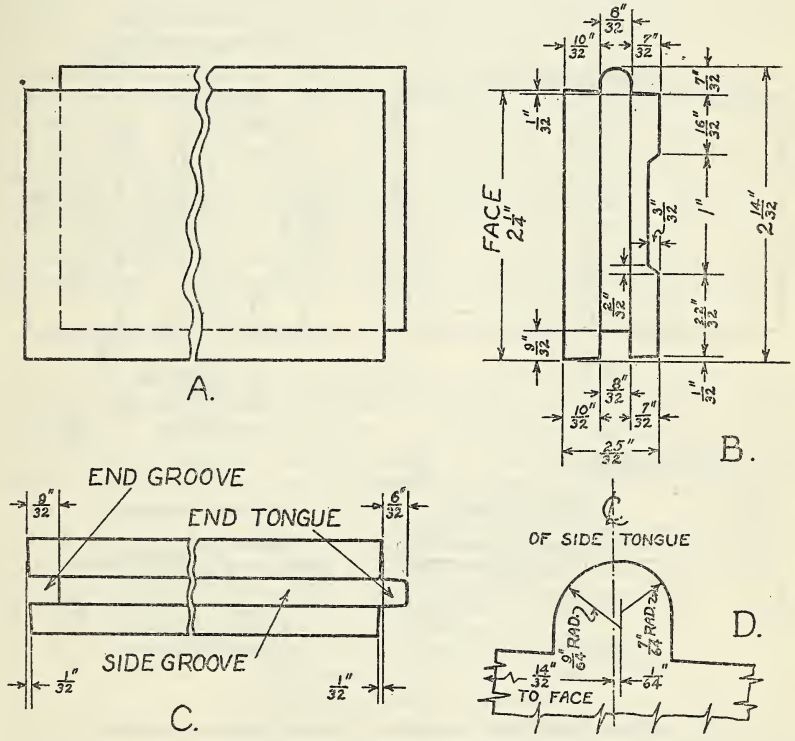


FIGURE 1.—$^{13}/_{16}$-*inch closet lining*

A, Top view; *B*, end view; *C*, side view; *D*, enlarged profile of side tongue.

In lining a closet already built and plastered, the lining may be placed directly on the plaster if care is exercised to nail only on the studding. Face nailing is recommended, but blind nailing may be used if preferred. It is not necessary that the end joints come directly over the studding as the end matching will hold any short pieces in perfect position that may be placed between studding.

Red cedar shelving is recommended. This adds to the general appearance of the closet or storage room and also increases its efficiency. It is also recommended that all corners be fitted with cedar

quarter-round molding, since the more cedar that can be economically worked into the installation the greater the efficiency, for it is the aroma that is thrown off from the cedar that checks destruction by moths, and the greater the quantity of cedar, the greater the amount of aroma.

FOR USE IN NEW HOMES

Where installation is being made in new homes, it is recommended that the closet be lined with wall board, deadening felt, or other insulating material free from offensive odors, or else plastered, but it may be nailed directly on the studding. In this event it is best to close all spaces between studding at the floor and at the ceiling in order to prevent the escape of aroma between the studs. Another

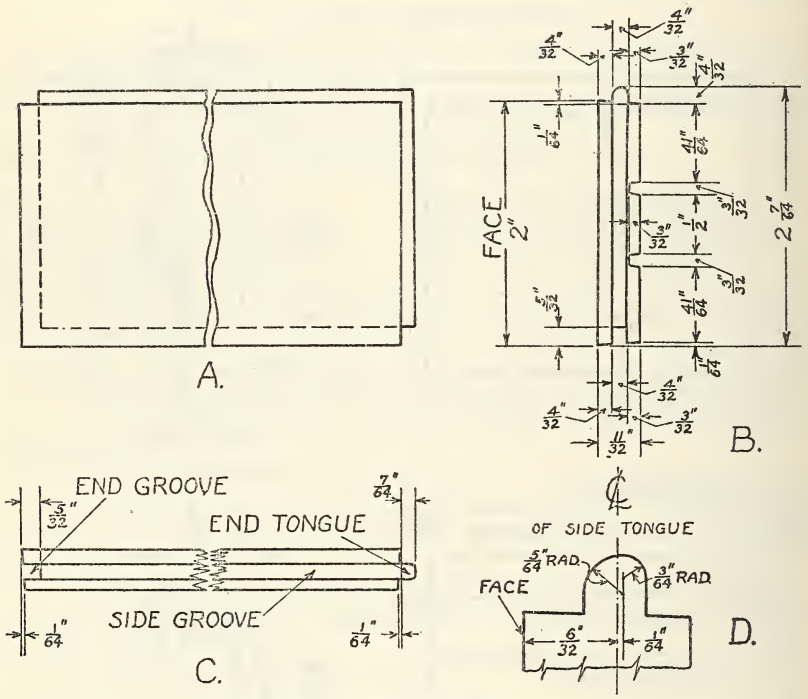


FIGURE 2.—*⅜-inch closet lining*

A, Top view; *B*, end view; *C*, side view; *D*, enlarged profile of side tongue.

method of preventing this loss of aroma from the back side of the lining is to coat it with a suitable material which will effectively seal the wood. Such protective coatings as shellac, paraffine, or lacquer, which are quick drying, have been found effective for this purpose.

Positively no paint, varnish, or other finish should be used on the interior of the closet, since this would seal the wood and prevent the volatilization of the cedar oil which is the effective agent in protecting stored material from ravages by clothes moths. Furthermore, painted or varnished surfaces within the closet may soften or become tacky and in this condition may damage garments coming in contact with them.

USE OF CEDAR CLOSETS, CHESTS, AND STORAGE ROOMS

All articles should be free from moth eggs and larvæ when placed in a cedar chest or closet. This can best be accomplished by dry cleaning. If this can not be done conveniently, the articles should be thoroughly brushed, aired, and sunned.

It is absolutely necessary that the door be kept closed except when articles are being placed in or removed from the closet. Failure to adhere strictly to this rule materially decreases the efficiency of the closet or other cedar storage receptacle.

GENERAL CONFERENCE

Pursuant to a request of the Aromatic Red Cedar Closet Lining Association, a general conference was held in Chattanooga, Tenn., on May 23, 1930, to which was invited all those thought to be interested in the production, sale, and use of red cedar closet lining.

The conference was presided over by Harry H. Steidle, of the division of trade standards, National Bureau of Standards, Department of Commerce, and Harry B. Weiss, president of the Cedar Lining Manufacturers Association, briefly reviewed the desirability of a high quality standard to assure the confidence and good will of the consuming public and the attendant prosperity to the industry.

The commercial standard grading rules were discussed in detail, and with certain constructive changes they were approved by the conference and recommended for general acceptance by the industry.

STANDING COMMITTEE AND EFFECTIVE DATE

A standing committee was appointed to represent the various phases of the industry and to receive all comments and suggestions for the improvement of the specification. At the expiration of six months from the date on which the standards become effective the standing committee will meet to consider what changes, if any, shall be made.

The standing committee consists of the following:

L. E. Brown, chairman, Geo. C. Brown Co., Memphis, Tenn.
J. A. Denison, Chickamauga Cedar Co., Stevenson, Ala.
C. C. Houston, Houston & Liggett, Lewisburg, Tenn.
Mrs. Arch Trawick, General Federation of Women's Clubs.
S. Percy Thompson, W. A. Pierce Co., Washington, D. C.
C. R. Macaulay, C. R. Macaulay Corporation, Brooklyn, N. Y.
Harry H. Steidle, ex officio secretary, National Bureau of Standards, Washington, D. C.

The conference voted that the commercial standard be made effective 30 days after announcement of formal acceptance of the standard. Formal acceptance was announced September 2, 1930, and the effective date was accordingly set at October 1, 1930.

CERTIFICATION PLAN

The conference voted its approveal of the certification plan for application to red cedar closet lining made in accordance with the commercial standard specification.

The certification plan as applied by the National Bureau of Standards to commercial standards consists in the compilation and distribution of lists of manufacturers who are willing, when requested

to do so, to certify to purchasers that products supplied by them comply with all the requirements and tests set forth in nationally recognized commercial standards. The plan is also applied to selected Federal specifications.

These lists are available on request to individual consumers, consumer groups, companies, and, in fact, to any prospective purchasers for their guidance.

The benefits now derived from the use of specifications by large consumers are thus made immediately available to the small consumer, with incidental advantage to the larger consumers of convenience in ordering and accepting material with fewer laboratory tests. The manufacturer also benefits from the well-known economies accompanying "mass production."

The lists of manufacturers "willing to certify" to the quality of certain commodities are made by corresponding with, as nearly as possible, all the manufacturers of that product and listing only those who signify their willingness to certify to the purchaser, when requested to do so, that the commodities delivered actually comply with the commercial standard.

Obviously, the purchaser making use of the lists of "willing to certify" manufacturers will select therefrom such manufacturers as are known (or assumed) by him to be reliable.

The trend toward the purchase of materials of certified quality from sources shown on such willing-to-certify lists supplies added incentive to standardization on the part of other producers; and thus the benefits of the certification plan will be felt by purchasers either directly or indirectly, whether or not they make use of the plan themselves.

COMMERCIAL STANDARDS SERVICE

Industry has long sensed the need for a wider application and use of specifications developed and approved by nationally recognized organizations. To assist these bodies and the producers and consumers in securing this result and as a natural outgrowth of the movement toward elimination of waste through simplified practice, the National Bureau of Standards has set up a procedure under which specifications, properly indorsed, may be printed as official publications of the Department of Commerce and promulgated as "commercial standards." This service parallels that of simplified practice in many respects and is available only upon request.

Broadly speaking, the aim is to continue the same character of cooperative service in this field that is being rendered in simplification. The division of trade standards is not designed to act as a standardizing body, nor will it engage in the preparation of specifications. Its service is mainly promotional in character, since its chief mission is to invite attention to a standard or a specification which any branch of industry may want to promulgate on a nation-wide basis; to determine its eligibility for promulgation; to publish and broadcast it in the event the prerequisites of procedure have been met, including a satisfactory majority acceptance; to facilitate the application of the certification plan for the assurance and convenience of the purchaser; to provide means for periodic audits of adherence; and to cooperate with the Bureau of Foreign and Domestic Commerce in

determining the desire of industry relative to translation and promulgation of such specifications as a basis of foreign commere.

In general, it may be said that a simplification covers types, sizes, and varieties of a commodity which are retained by industry on the basis of demand, whereas a commercial standard establishes definite requirements as to grade, quality, or dimensional tolerances in addition to any limitation of variety desired and accepted by the industry.

ORGANIZATION AND DUTIES OF STANDING COMMITTEE

In order to carry on the aims and desires of the industry in the standardization of their product, a standing committee is appointed at the general conference. This committee consists of members from each division of the industry, namely, producers, distributors, and consumers, and thus reflects the well balanced viewpoint of all concerned.

The members of the committee receive all suggestions regarding the commercial standard and consider its revision in the event that such action is desirable and mutually beneficial.

If the commercial standard does not warrant revision, it is reaffirmed in its existing form; but if any important changes are found desirable, their adoption is recommended by the committee, whereupon the industry is again solicited for written acceptance of the standard in its revised form.

The committee is in effect a centralizing agency for criticisms and comments regarding the commercial standard and is charged with the responsibility of recommending revisions to keep the standard abreast with current industrial practice.

The proper functioning of the committee requires that, when necessary, its members be willing to attend meetings held at some central place, although in many cases it will be possible to conduct the work by correspondence.

When any deceptions in reference to the commercial standard are reported to the standing committee, it applies moral suasion or such other corrective measures as seem desirable. The Department of Commerce has no "police power" to compel adherence; therefore it is incumbent upon the standing committee to do all in its power to encourage all divisions of the industry to follow the provisions of the commercial standard and contribute in every way possible to its general adoption and usefulness.

YOUR COOPERATION

As a producer, distributor, or consumer of some of the commodities for which commercial standards have already been established, you are in a position to avail yourself of the benefits arising from the use of quality standards and, incidentally, to add impetus to this method of eliminating waste.

The first step is a declaration in favor of the standard by recording your intention to adhere, as closely as circumstances will allow, to the standards for those products which you may buy or sell.

The receipt of your signed acceptance will permit the listing of your company in new editions of the commercial standards that you accept.

You will, of course, want to examine any commercial standards before signing a formal acceptance. The National Bureau of Standards will, therefore, furnish a copy of any standard under consideration for acceptance. To facilitate this procedure, a list appears on page 12 that may be checked and mailed to the Division of Trade Standards, National Bureau of Standards, Washington, D. C. The publications may also be secured singly or in quantities at a nominal price from the Government Printing Office. Prices will be furnished upon request.

The acceptance of a commercial standard is an entirely voluntary action, and applies to the production, sale, and use of stock items. It is not meant to interfere with the manufacture or sale of special sizes and types sometimes required.

Trade associations and individual companies often distribute large numbers of the printed standard for the information and guidance of their members or customers. In such cases it is possible to extend the scope and degree of adherence by urging each recipient to send in an acceptance, bearing in mind that the practical value of any standardization is measured by the observance it receives.

An acceptance form for the commercial standard herein covered is included on page 9.

ACCEPTANCE OF COMMERCIAL STANDARD

[Please sign and return this sheet to Division of Trade Standards, Bureau of Standards, Washington, D. C.]

Date_____

DIVISION OF TRADE STANDARDS,
NATIONAL BUREAU OF STANDARDS,
Washington, D. C.

GENTLEMEN: We, the undersigned, do hereby accept the original draft of the commercial standard, as our standard practice in the {production [1] / distribution [1] / use [1]} of aromatic red cedar closet lining, beginning _____ (Date), and will use our best effort in securing its general adoption.

To permit intelligent review of the effectiveness of the commercial standard every year by an accredited committee of all interests, working in cooperation with the Department of Commerce, we plan to supply all data, upon request, which may be necesssary for the development of constructive revisions. It is understood that any suggested modifications will be submitted as soon as formulated and shall not be promulgated until accepted in form similar to this recommendation.

(Cut on this line)

Signature _____
(Kindly typewrite or print the following lines)

Title _____

Company _____

Street address _____

City and State _____

We are members of the following associations or other organizations interested in the production, sale, or use of aromatic red cedar closet lining:

[1] Please designate which group you represent by drawing lines through the other two. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval, the words "in principle" should be added after the signature.

TO THE ACCEPTOR

In signing the acceptance blank, please bear the following points clearly in mind:

1. *Adherence.*—The Department of Commerce has no regulatory powers to enforce adherence to the commercial standards. Instead this waste-elimination program is based on voluntary cooperation and self-government in industry. To make this specific standardization operate as a satisfactory example of self-government, it is highly desirable that it be kept distinct from any plan or method of governmental regulation or control. It will be successful according to the degree to which manufacturers, distributors, and purchasers adhere to its terms and conditions.

2. *The industry's responsibility.*—The department cooperates only on the request of the industry and assumes no responsibility for industrial acceptance or adherence. This program was developed by the industry on its own initiative. Its success depends wholly on the active cooperation of those concerned.

3. *The acceptor's responsibility.*—You are entering into an entirely voluntary arrangement, whereby the members of the industry—the distributors and consumers of the product, and others concerned—hope to secure the benefits inherent in commercial standardization. Those responsible for this standard realize that instances may occur in which it will be necessary to supply or purchase items not included therein. The purpose is, however, to secure wider support for nationally recognized standards covering grade, quality, and other characteristics of products. Consumers can make the program a success if, in their purchasing, they will make a definite and conscientious effort to specify in terms of this commercial standard.

4. *The department's responsibility.*—The function performed by the Department of Commerce is fourfold: First, to act as a referee to insure adequate consideration of the needs of all interests; second, to supply such assistance and advice in the development of this program as past experience with similar programs may suggest; third, to solicit and record the extent of adoption and adherence to the standard; and fourth, to add all possible prestige to this standardization movement by publication and promulgation if and when it is adopted and accepted by all elements directly concerned.

REQUEST FOR COMMERCIAL STANDARDS

Date _____

DIVISION OF TRADE STANDARDS,
NATIONAL BUREAU OF STANDARDS,
Washington, D. C.

GENTLEMEN: The undersigned wishes to examine the commercial standards checked on the reverse side of this page, with a view toward accepting them as our standard of practice in the production, distribution, or consumption of the standardized lines.

(Cut on this line)

Signed _____
(Kindly typewrite or print the following lines)

Title _____

Company _____

Street address _____

City and State _____

COMMERCIAL STANDARDS

CS. No.	Item
0–30.	The commercial standards service and its value to business.
1–28.	Clinical thermometers.
2–30.	Mop sticks.
3–23.	Stoddard solvent.
4–29.	Staple porcelain (all-clay) plumbing fixtures.
5–29.	Steel pipe nipples.
6–29.	Wrought-iron pipe nipples.
7–29.	Standard weight malleable iron or steel screwed unions.
8–30.	Plain and thread plug and ring gage blanks.
9–29.	Builders' template hardware.
10–29.	Brass pipe nipples.
11–29.	Regain of mercerized cotton yarns.
12–29.	Domestic and industrial fuel oils.
13–30.	Dress patterns.
14–31.	Boys' blouses, button-on waists, shirts and junior shirts (in preparation).
15–29.	Men's pajamas.
16–29.	Wall paper.
17–30.	Diamond core drill fittings.
18–29.	Hickory golf shafts.
19–30.	Foundry patterns of wood.
20–30.	Staple vitreous china plumbing fixtures.
21–30.	Interchangeable ground-glass joints.
22–30.	Builders' hardware (nontemplate).
23–30.	Feldspar.
24–30.	Standard screw threads.
25–30.	Special screw threads.
26–30.	Aromatic red cedar closet lining.
27–30.	Plate glass mirrors (in preparation).